Watersheds: Sacramento, San Joaquin, Tulare

Sampling Period: August 27, August 31 and September 3, 2008 (Before, During and After Labor Day Weekend)

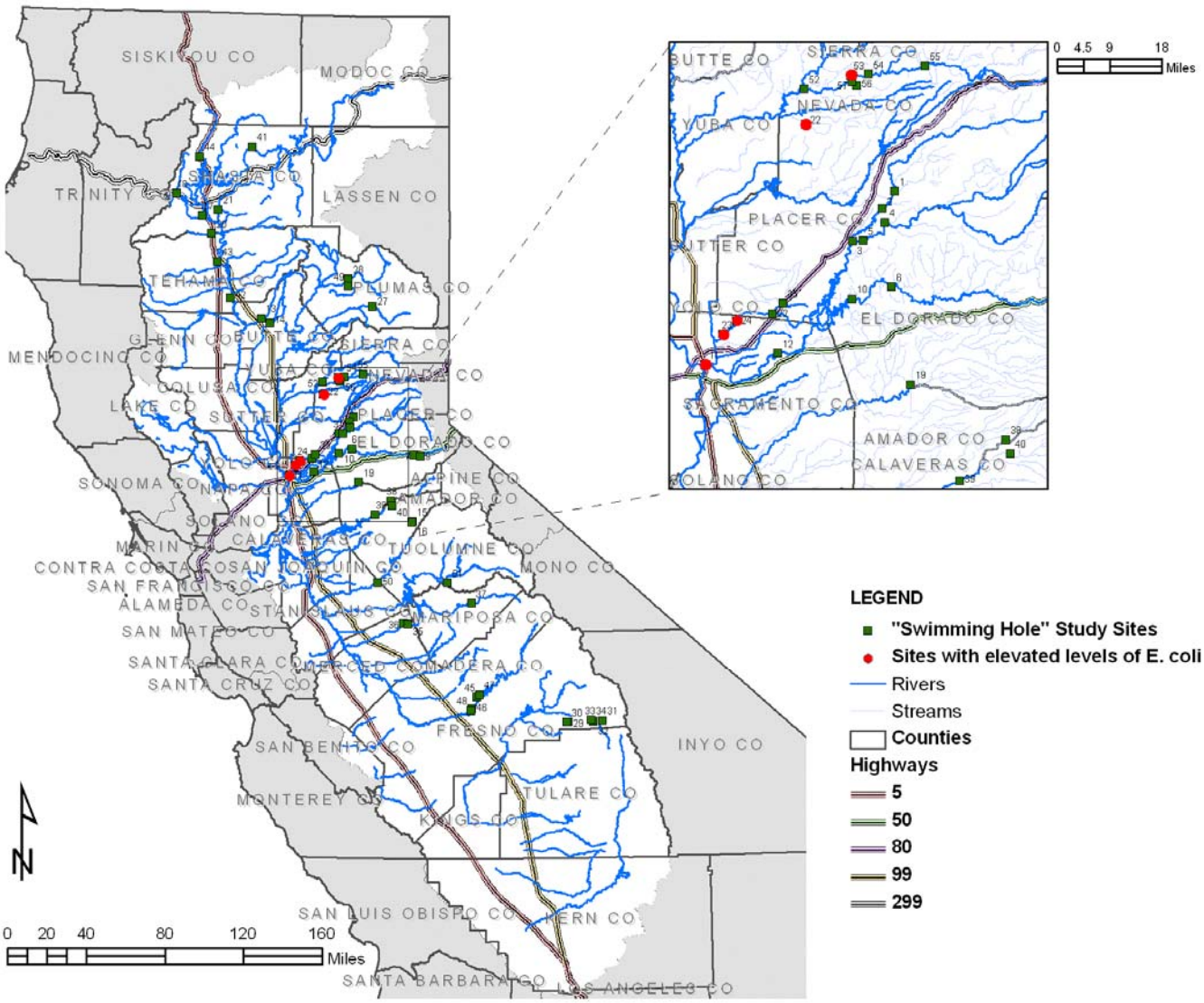
Report Objectives: Assess whether local swimming holes in the Central Valley are safe-to-swim during a period of anticipated elevated recreation (e.g. over a holiday weekend) using *E. coli* as a pathogen indicator

KEY STATISTICS

Number of sites sampled	*57*
Number of Constituents measured	*4*
Samples Taken	*298*
Number of Participating Watershed Groups	*21*

MESSAGE: ***52 out of 57 swimming hole sites did NOT exceed the EPA's recommended full contact recreation limit for E. coli (235 MPN/100 mL).***

Site Locations:



Summary of sites with *E. coli* levels elevated above the USEPA Guideline (>235 MPN/100 mL)

County	Site Description	E. coli (MPN/100 mL)		
		08/27/08	08/31/08	09/03/08
Sacramento	American River at Discovery Park	1413.6	275.5	187.2
Nevada	Squirrel Creek in Western Gateway Park, Penn Valley (Deer Creek Watershed)	228.2 [a]	214.2	108.1
Placer	Dry Creek/ Cirby Creek confluence	2419.6	209.8	272.3
Placer	Dry Creek @ Walerga Bridge	290.9	54.5	63.1
Nevada	South Yuba River at Purdon crossing	<1.0	2	290.9

[a] A duplicate Quality Assurance field sample at this site exceeded the EPA guideline with a value of 260.3 MPN/100mL

WHAT IS THE MEASURE SHOWING?

Results show that 52 out of a total of 57 sites did not exceed the EPA's recommended full contact recreation limit for *E. coli* (235 MPN/100mL) on any of the three collection dates. Of the five sites with elevated levels, four sites in the Sacramento River Basin exceeded the EPA's recommended limit for *E. coli* on one or more of the collection dates. An additional site in the Sacramento River Basin had a duplicate Quality Assurance field sample exceed the EPA guideline. Four of these five sites exhibited the highest *E. coli* concentrations on the first day of the study, before the Labor Day weekend. Elevated *E. coli* concentrations prior to the highest level of human use indicate that factors other than human recreation likely dominate *E. coli* concentrations.

WHY THIS INFORMATION IS IMPORTANT?

Using *E. coli* as a pathogen indicator, the Central Valley Water Board field staff were able to provide information to 21 interested watershed groups as to whether there was any indication that it was not safe to swim in their local streams, creeks and rivers. The information was also utilized to focus a follow-up study in each watershed of concern during June 2009. All the information from both studies has been provided to the local departments of public health.

WHAT FACTORS INFLUENCE THE MEASURE?

E. coli comes from human or animal waste. In addition to human recreational use, the presence of *E. coli* in water may be the result of cattle grazing, urban and agricultural runoff, or sewage spills. The physical condition of the watershed may also influence *E. coli* measurements, however in this study the flow data and field measurements of temperature, SC and pH were variable between sites and it is unclear if these constituents or variable flow had an effect on the *E. coli* measurements.

TECHNICAL CONSIDERATIONS:

- Data source: Central Valley Water Board SWAMP
- *E. coli* is only an indicator of potential pathogens and does not necessarily identify an immediate health concern.
- Public report and fact sheet are available at: http://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_studies/surface_water_ambient_monitoring/swamp_regionwide_activities/index.shtml